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NEW PHOTOGRAPHIC TELESCOPE PRESENTED TO THE GREENWICH OBSERVATORY BY SIR HENRY THOMPSON.

Sir HENRY THOMPSON, the eminent surgeon, has, the *Observatory* magazine states, offered the sum of £5000 sterling to the nation, through the Astronomer Royal, for the purpose of buying a telescope for Greenwich Observatory. It is not often astronomy finds such a generous patron, on this side of the Atlantic at least, and, moreover, one who can so well appreciate the exact needs of the science at the moment. For Sir HENRY THOMPSON, foreseeing that the astronomy of the future is to be photographic, and feeling that England should be well equipped in this arm, makes it a condition of his gift that the telescope is to be expressly designed for photographic purposes. So far as the plans are made, and subject to the acceptance of the offer by the Government, the instrument is to be of 26-inch aperture, just twice that of the telescopes used for the photographic chart of the heavens—in fact, the instrument is to be made from the model of the astrographic equatorial, but of exactly double the dimensions in every particular. The guiding telescope for the new instrument will be the 12¾-inch MERZ refractor with a light tube; and the 9-inch photographic objective presented by Sir HENRY THOMPSON to the Royal Observatory some years ago will also be carried on the same mounting, for use as a photo-heliograph, as at present. The new instrument, when completed, will be housed under the LASSELL Dome, on the top of the central octagon of the new Physical Observatory, now being built in the south grounds of the Royal Observatory.—London *Telegraph*, March 3, 1894.

THE SPECTRUM OF LIGHTNING.

An ingenious method of photographing the spectrum of lightning is proposed in the current number of *Wiedemann's Annalen* by G. MEYER. The difficulty of directing the slit of the spectroscope upon the flash is got over by substituting a diffraction grating for the prism. A grating ruled on glass is placed in front of the object-glass of the apparatus, the object-glass being focused for infinite distances. Under these circumstance several images of the flash are obtained, a central image produced by the undiffracted rays, and images of the first and higher orders belonging to the diffraction spectra. The number of images of each order corresponds to the number of lines in the spectrum of the lightning. The arrangement was tested during a night thunderstorm. Two plates were exposed in a camera with a landscape lens of 10 cm. focal length, provided with a grating with 40 lines to the mm. One of the plates showed two flashes with their diffraction images of the first order, but representing one line only. The other showed a number of flashes, and one very strong one, passing apparently between two chimney-pots, with its diffraction images well marked. A calculation of the wave-length of the light producing these images gave 382 $\mu\mu$. The measurement was not sufficiently accurate to warrant an identification of this line with a known wave-length, but it is certain that a radiation of about this wave-length must be added to the lines determined by SCHUSTER and VOGEL. It is probable that with better apparatus the method may be made to considerably increase our knowledge of the ultra-violet spectrum of lightning.—*Nature*, March 1, 1894.

SPECIAL STUDENTS AT THE LICK OBSERVATORY.

Applications to be received as special students at Mount Hamilton during the summer of 1894 have been received from the following:

Miss MARY E. EDWARDS	Stanford University.
Mr. JOHN S. HODGIN	" "

These students have been accepted; other applications are still under consideration.

STEAM-HEATING IN THE LICK OBSERVATORY.

We have lately fitted some of the offices and rooms of the Observatory with steam-coils formerly used in the South Hall at Berkeley, connecting them with the steam-engine employed to drive the dynamo. In this way it is possible to heat these offices and rooms without being subjected to the intolerable smoke which has been endured—more or less patiently—for six years.* The cost to the Observatory has been *nil*. The coils had been rejected at Berkeley, and the LICK Observatory workmen have done all the steam-fitting. E. S. H.

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* See *Publications* A. S. P., Vol. II, page 63.